

# PATENT ABSTRACTS OF JAPAN

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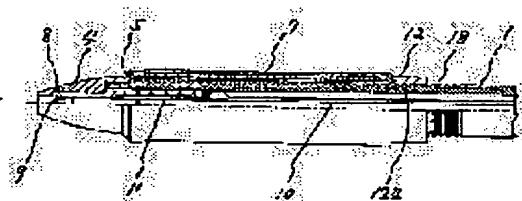
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## (54) GRASPING PART STRUCTURE FOR WRITING INSTRUMENT, COATING APPLICATOR

### (57)Abstract:

**PURPOSE:** To obtain the grip part structure for a writing instrument or a coating applicator having delicate grip feeling.

**CONSTITUTION:** A deformable cylindrical grip unit 7 in which gas, liquid, a gelled or gelatinous material is sealed is disposed at the front of a barrel 1. Threads 1a are provided on the front outer surface of the barrel, and a rotary member 12 having threads 12a engaged with the threads 1a on the inner surface is interlocked to the rear of the unit. The member 12 is rotated to vary the unit in the radial direction.



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**CLAIMS**

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**[Claim(s)]**

[Claim 1] Grasping section structure in the writing implement and applicator which come to arrange the deformable tubed grasping object which enclosed the gas, the liquid, the gel object, or the jelly-like object with the interior ahead of the shaft tube.

[Claim 2] It arranges so that the front end may not move ahead the deformable tubed grasping object which enclosed the gas, the liquid, the gel object, or the jelly-like object with the interior ahead of the shaft tube. Moreover, grasping section structure [ in /, the bottom / a writing implement and the applicator ] where said grasping object may be changed in the direction of a path by forming a screw in the front section external surface of a shaft tube, making the posterior part of said grasping object connect [ external surface / screw / this / inside ] the rotation member which formed the screw to screw, and rotating a rotation member.

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## DETAILED DESCRIPTION

### [Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the grasping section structure in the writing implement and applicator which can appear the delicate grasping feel of the grasping section.

[0002]

[Description of the Prior Art] As a typical conventional technique, the grasping object which consists of rubber-like cylinder part material is fixed to the shaft tube of a writing implement.

[0003]

[Problem(s) to be Solved by the Invention] In the above mentioned conventional technique, since it was the grasping object which only consists of rubber-like cylinder part material, a delicate grasping feel was not able to be appeared.

[0004]

[Means for Solving the Problem] Then, this invention is a thing aiming at offering the grasping section structure in the writing implement and applicator which can appear a delicate grasping feel. The writing implement which comes to arrange the deformable tubed grasping object which enclosed the gas, the liquid, the gel object, or the jelly-like object with the interior ahead of the shaft tube, Make grasping section structure in the applicator into the 1st summary, and it arranges so that the front end may not move ahead the deformable tubed grasping object which enclosed the gas, the liquid, the gel object, or the jelly-like object with the interior ahead of the shaft tube. Moreover, form a screw in the front section external surface of a shaft tube, and the posterior part of said grasping object is made to connect [ external surface / screw / this / inside ] the rotation member which formed the screw to screw, and let grasping section structure in a writing implement and the applicator be the 2nd summary by rotating a rotation member the bottom which may change said grasping object in the direction of a path.

[0005] Although the example applied to the ball-point of a writing implement is explained hereafter, in various writing implements, such as fountain pens other than a ball-point (for example, a mechanical pencil), and a marking pen, and applicator, such as a makeup implement, it is applicable similarly. Drawing 1 shows the 1st example of this invention, a reference mark 1 is a shaft tube which consists of synthetic resin, a metal, etc., and the point member 4 to which the diameter reduction section 3 is formed through the step 2, and this shaft tube 1 consists of a metal, synthetic resin, etc. ahead [ of this diameter reduction section 3 ] is screwed. Although it will dent by the back end 5 of this point member 4, said diameter reduction section 3, and said step 2 and 6 will be formed, the grasping object 7 is arranged in this depression 6. Said grasping object 7 is cylindrical, and although it consists of the deformable quality of the materials, such as synthetic rubber, such as thermoplastic elastomer which enclosed liquids, such as gases, such as air, or an oil of silicone oil or others, and water, the gel object, or the jelly-like object with the interior, silicone rubber, and isobutylene isoprene rubber, if airtight dependability is taken into consideration, especially the isobutylene isoprene rubber that enclosed silicone oil with the interior is desirable. moreover, this grasping object 7 may color a color suitably the thing enclosed for the improvement in a fine sight, and (or) the thing to enclose. Furthermore, making with a split face, forming the knurling tool by the projected part or the depression, or forming

much small projections etc. can be variously used for the outside configuration of the grasping object 7.

[0006] A reference mark 8 is a ball-point with which it has the ball-point point section 9 at a tip, and it has the ink hold tubing 10 back. Moreover, in this example, it is the example of a frequent appearance-type ball-point, and although drawing which held the ball-point point section 9 in the shaft tube 1 was shown, a reference mark 11 is a member from a cartridge which always energizes the ball-point point section 9 in a shaft tube 1.

[0007] In addition, in this example, various modifications are employable. In this example, for example, the bottom which arranges the grasping object 7 to the depression 6 of a shaft tube 1 The means which the reason is because immobilization of the grasping object 7, and can fix the grasping object 7, For example, it is making or pasting [ \*\*\*\* / forming a rib in shaft tube 1 front face of the grasping object 7 order edge ] up the grasping object 7 on a shaft tube 1 with a binder so that a ring member's may be attached firmly and the grasping object's 7 may be arranged in the meantime etc.

[0008] Drawing 2 and 3 show the 2nd example of this invention, and give a same sign to the 1st example and the said division. The point member 4 is screwed in the front end of a shaft tube 1, and the deformable tubed grasping object 7 which enclosed the gas or the liquid with the interior the back end 5 and the front end of this point member 4 contact ahead of a shaft tube 1 is arranged. Moreover, screw 1a is prepared in the front section external surface of a shaft tube 1, the rotation member 12 which prepared screw 12a in this screw 1a is screwed in the inside, and the posterior part of said grasping object 7 is made to connect [ inside ] this rotation member 12. Therefore, although the rotation member 12 will move to a longitudinal direction when the rotation member 12 is rotated, the grasping object 7 will change with migration of this rotation member 12 in the direction of a path (refer to drawing 3 ). That is, with the migration die length of the rotation member 12, the variation to the direction of a path of the grasping object 7 will be determined, and the variation to the direction of a path of the grasping object 7 can be determined according to liking of a user. In addition, although it is necessary to arrange to a shaft tube 1 so that the front end may not move the grasping object 7 ahead The bottom which utilizes the back end 5 of the point member 4 in the example of illustration as a concrete means for that In addition to this, a rib and a step may be formed in shaft tube 1 front face, a ring member may be attached firmly, and the front end section inside of the grasping object 7 may be pasted up on a shaft tube 1, and various means can be adopted.

[0009]

[Effect of the Invention] Since the deformable tubed thing which enclosed the gas, the liquid, the gel object, or the jelly-like object with the interior as a grasping object was used for this invention, when it grasps a grasping object at the time of a note or spreading, a grasping object can deform it delicately, consequently it can appear the delicate grasping feel of the grasping section. Moreover, in the 2nd example, while having the effectiveness that the delicate grasping feel of the grasping section can be appeared, it has the contingent effect that the variation to the direction of a path of a grasping object can be determined according to liking of a user.

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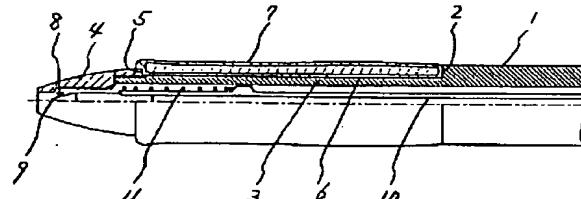
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(54)【発明の名称】 筆記具、塗布具における把持部構造

(57)【要約】 (修正有)

【目的】微妙な把持感触を備えた筆記具、塗布具の把持部構造。

【構成】軸筒1の前方に、内部に気体、液体、ゲル状体又はゼリー状体を封入した変形可能な筒状の把持体7を配置する。軸筒の前方部外面に螺子1aを設け、これにかみ合う螺子12aを内面に備えた回転部材12を、把持体の後部に連接させる。回転部材12を回転させることにより、把持体を径方向に変化させるよう構成する。



## 【特許請求の範囲】

【請求項1】 軸筒の前方に、内部に気体又は液体又はゲル状体又はゼリー状体を封入した変形可能な筒状の把持体を配置してなる筆記具、塗布具における把持部構造。

【請求項2】 軸筒の前方に、内部に気体又は液体又はゲル状体又はゼリー状体を封入した変形可能な筒状の把持体をその前端が前方に移動しないよう配置し、又、軸筒の前方部外面に螺子を設け、該螺子に螺合する螺子を内面に設けた回転部材を前記把持体の後部に連接せしめ、回転部材を回転させることにより前記把持体を径方向に変化し得るようした筆記具、塗布具における把持部構造。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】本発明は、把持部の微妙な把持感触を現出できる筆記具、塗布具における把持部構造に関するものである。

## 【0002】

【従来の技術】代表的な従来技術としては、ゴム状の筒部材よりなる把持体を筆記具の軸筒に固定したものである。

## 【0003】

【発明が解決しようとする課題】前記した従来技術においては、単にゴム状の筒部材よりなる把持体であるため、微妙な把持感触を現出することができなかつた。

## 【0004】

【課題を解決するための手段】そこで本発明は、微妙な把持感触を現出することができる筆記具、塗布具における把持部構造を提供することを目的とするもので、軸筒の前方に、内部に気体又は液体又はゲル状体又はゼリー状体を封入した変形可能な筒状の把持体を配置してなる筆記具、塗布具における把持部構造を第1の要旨とし、軸筒の前方に、内部に気体又は液体又はゲル状体又はゼリー状体を封入した変形可能な筒状の把持体をその前端が前方に移動しないよう配置し、又、軸筒の前方部外面に螺子を設け、該螺子に螺合する螺子を内面に設けた回転部材を前記把持体の後部に連接せしめ、回転部材を回転させることにより前記把持体を径方向に変化し得るようした筆記具、塗布具における把持部構造を第2の要旨とするものである。

【0005】以下、筆記具のボールペンに適用した実施例を説明するが、ボールペン以外の例えばシャープペンシル、万年筆、マーキングペンなど種々の筆記具や、化粧具などの塗布具においても同様に適用できるものである。図1は本発明の第1実施例を示すもので、参照符号1は合成樹脂、金属などよりなる軸筒であり、該軸筒1は段部2を介して縮径部3が設けられており、該縮径部3の前方には金属、合成樹脂などよりなる先部材4が螺合されている。この先部材4の後端5と、前記縮径部3

と、前記段部2とによって凹み6が形成されることとなるが、この凹み6には、把持体7が配置されている。前記把持体7は、筒状であり、内部に空気などの気体、又は、シリコーンオイルやその他の油、水などの液体、又は、ゲル状体、又は、ゼリー状体を封入した熱可塑性エラストマー、シリコーンゴム、ブチルゴム等の合成ゴムなどの変形可能な材質よりなるものであるが、密閉の信頼性を考慮すれば、内部にシリコーンオイルを封入したブチルゴムが特に好ましい。又、この把持体7は、美観向上のために、封入されるもの及び（又は）封入するものを適宜色に着色してもよい。更に、把持体7の外面形状は、粗面となしたり、突部もしくは凹みによるローレットを形成したり、多数の小突起を形成するなど種々採用できる。

【0006】参照符号8は先端にボールペン先部9、後方にインキ収容管10を有するボールペンである。又、本例においては、出没式のボールペンの例であり、ボールペン先部9を軸筒1内に収容した図を示したが、参照符号11はボールペン先部9を常時軸筒1内に付勢する弾発部材である。

【0007】尚、本例において種々の変形例が採用できる。例えば、本例においては、軸筒1の凹み6に把持体7を配置するようなしたが、その理由は把持体7の固定のためであって、把持体7を固定することができる手段、例えば把持体7の前後端の軸筒1表面にリブを形成したり、リング部材を止着し、その間に把持体7を配置するようなしたり、把持体7を接着材によって軸筒1に接着するなどである。

【0008】図2、3は本発明の第2実施例を示すもので、第1実施例と同部位には同符号を付す。軸筒1の前端には先部材4が螺合されており、軸筒1の前方には該先部材4の後端5とその前端が当接する内部に気体又は液体を封入した変形可能な筒状の把持体7が配置されている。又、軸筒1の前方部外面には螺子1aが設けられており、該螺子1aには内面に螺子12aを設けた回転部材12が螺合されており、該回転部材12を前記把持体7の後部に連接せしめている。よって、回転部材12を回転させると、回転部材12が長手方向に移動することとなるが、この回転部材12の移動によって、把持体7が径方向に変化することとなる（図3参照）。即ち、回転部材12の移動長さによって把持体7の径方向への変化量が決定されることとなり、使用者の好みに応じて把持体7の径方向への変化量を決定することができる。尚、把持体7をその前端が前方に移動しないよう軸筒1に配置する必要があるが、そのための具体的手段としては、図示の例においては先部材4の後端5を活用するようなしたが、これ以外に、軸筒1表面にリブや段部を形成したり、リング部材を止着したりしてもよく、又、把持体7の前端部内面を軸筒1に接着してもよく種々の手段が採用可能である。

## 【0009】

【発明の効果】本発明は、把持体として内部に気体又は液体又はゲル状体又はゼリー状体を封入した変形可能な筒状のものを採用したので、筆記時又は塗布時に把持体を把持した際、把持体が微妙に変形し、その結果、把持部の微妙な把持感触を現出することができる。又、第2の実施例においては、把持部の微妙な把持感触を現出することができるという効果を有すると共に、使用者の好みに応じて把持体の径方向への変化量を決定することができるという付加的効果を有する。

## 【図面の簡単な説明】

【図1】第1実施例を示す一部縦断面図。

【図2】第2実施例を示す一部縦断面図。

【図3】第2実施例の動作説明図。

## 【符号の説明】

1 軸筒

1 a 螺子

2 段部

3 縮径部

4 先部材

5 先部材の後端

6 凹み

7 把持体

8 ボールペン

9 ボールペン先部

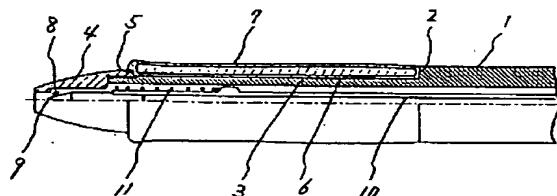
10 インキ収容管

11 弾発部材

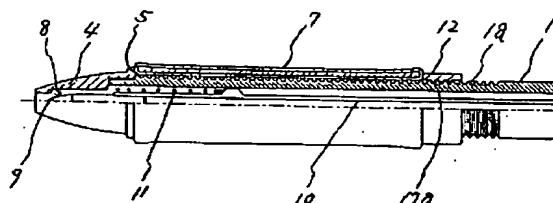
12 回転部材

12 a 螺子

【図1】



【図2】



【図3】

